

Roll No.

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Total No. of Pages : 02

Total No. of Questions : 09

MCA (Elective-I) (2012 & Onwards) (Sem.-3)

SYSTEM PROGRAMMING

Subject Code : MCA-305A

Paper ID : [B1161]

Time : 3 Hrs.

Max. Marks : 100

INSTRUCTIONS TO CANDIDATES :

- 1. SECTIONS-A, B, C & D contains TWO questions each carrying TWENTY marks each and students has to attempt any ONE question from each SECTION.**
- 2. SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.**
- 3. Use of non-programmable scientific calculator is allowed.**

SECTION-A

1. Explain the concept of single-pass assembler in detail. How is it different from two-pass assembler?
2. What are the various features of Macro facility?

SECTION-B

3. Elaborate the design of Absolute and Bootstrap loader.
4. Compare and contrast various types of Editors.

SECTION-C

5. Write a note on : Debugger and Grammar classification.
6. Describe the working of a Compiler explaining each of its phases.

SECTION-D

7. What is an Operating system? What are its various functions? Briefly explain the types of operating systems.
8. Write notes on :
 - a) Booting techniques and subroutines.
 - b) Device drivers.

SECTION-E

9. **Describe briefly :**
 - a. Functions of a language processor.
 - b. Various Loader schemes.
 - c. Difference between Static and dynamic linking.
 - d. Why code optimization is done?
 - e. Advantages of using Just-in-time compiler.
 - f. Give two examples of real-time operating system.
 - g. Advantages of distributed operating system.
 - h. Characteristics of plug-and-play systems.
 - i. Bootstrapping.
 - j. Why I/O programming is done?